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By-Stricker, Lawrence J.; Jackson, Douglas N.

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The research reported in this study explores two problematic avenues of conformity research: (1) the widely assumed generality of diverse measures of group pressure, and (2) the dimensionality of conformity, anticonformity, and independence. These two conformity situations, present and nonpresent norm groups, used two tasks (an objective counting of metronome clicks and a subjective agreement to attitude items) to yield a four-group study of these problems with 190 high-school age subjects. Comparison of pre-pressure and under-pressure responses in the four procedures gave scores of conformity (moving toward consensus), anticonformity (moving away from concensus), and independence (no change). Suspicious and unsuspicious subjects were analyzed separately by a 12 by 12 factor analysis. Some five factors were identified for unsuspicious subjects, and three for suspicious subjects. For the unsuspicious, any procedural variation produced a difference, while for the suspicious, only variation in social situation produced a difference. Conformity and independence appeared to represent a bipolar dimension, with anticonformity distinct from both. (BP)

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DIMENSIONALITY OF SOCIAL INFLUENCE

Lawrence J. Stricker, Samuel Messick
Educational Testing Service
and
Douglas N. Jackson
University of Western Ontario

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Dimensionality of Social Influence

There are many behavioral measures of susceptibility to group pressure, most of them focussing on conformity to this form of social influence. More often than not, these procedures are implicitly assumed to be equivalent. This failure to distinguish between devices that may, in fact, function very differently can account for some of the inconsistent findings that have been reported.

The measures vary along two important but complex parameters. One is the social situation: responding publicly in a face-to-face group or responding privately in reaction to an aggregation of peers who are not physically present. The other parameter is the experimental task: objectively correct and unambiguous or subjective and ambiguous. These variables might well be expected to produce differential functioning. Clearly, the assumed generality of such measures requires systematic exploration.

The dimensionality of the responses on the various devices is also uncertain. Typically, scores are only obtained for conformity -- that is, the subject's tendency towards congruence with the group -- but scores for other reactions can also be secured and are equally relevant. These include anticonformity and independence, the first involving behavior that runs counter to the group and the second behavior that is simply unaffected by the group. Whether these various responses are essentially mirror images of each other or define different dimensions remains a matter for speculation.

The present study had two purposes. One was to examine the generality of diverse measures of group pressure, varying systematically in the potentially relevant parameters of social situation and task. The second was to

investigate the dimensionality of conformity, anticonformity, and independence responses on these measures.

Method

Procedures

In devising or adapting procedures to represent the two parameters, the Asch (1956) situation was chosen as the prototype for the face-to-face group with public responding. A questionnaire readministered with fictitious average answers was selected as the model for the nonpresent norm group. The objective tasks were counting metronome clicks, for the face-to-face situation, and making estimates of the probability of certain events occurring, for the nonpresent norm group situation. The subjective task in both situations was indicating agreement or disagreement with attitude items. The facet design for the procedures appears in Figure 1 of your handout.

The four procedures resemble those commonly used in group-pressure research, thereby facilitating generalizability of the results obtained with them. On each device, responses from an initial administration in which the subject answered privately and without knowledge of the ostensible group norms were compared with responses from a subsequent administration in which he answered after exposure to the norms.

There were three data-gathering sessions. At the first, tests and questionnaires containing the items from the group-pressure procedures were administered with standard test-taking instructions. At the second session, subjects appeared in groups of five for a simulated-group version (Olmstead & Blake, 1955) of the Asch situation. Subjects reported the number of metronome clicks that they heard and their agreement or disagreement with attitude

items -- after listening to confederates' responses. These responses systematically differed from the correct or average response. At the end of this session, subjects completed an open-ended questionnaire concerning their perceptions of the study's purpose and the behavior of the other subjects. At the last session, the second version of the questionnaire measures of group pressure was given, this time containing the purported average answers for the group. These answers were fictitious, diverging from the average responses in similar samples. One questionnaire consisted of items such as: "The chances that an American astronaut will reach the moon before 1970 are about _____ in 100." The second measure contained heterogeneous attitude statements. These devices were followed by another open-ended questionnaire similar to the first one. At the end of this session, the deceptions and purpose of the study were fully described to the subjects.

Scoring the Conformity Measures

Scores for conformity, anticonformity, and independence were obtained from each of the four procedures. The conformity score was the number of items on which the response changed between the two sessions towards the direction of the confederates' responses or the reported average answer. Anticonformity was the number of items on which the response changed in the opposite direction. And independence was the number of items on which the response did not change.

Subjects

The total sample consisted of 101 boys and 89 girls, who were either in the 11th or 12th grades of high school or had just graduated. The data were analyzed separately for two subgroups. One consisted of 43 subjects who were unsuspicious about the deceptions employed in both the simulated-group and questionnaire procedures. The other was composed of subjects who were suspicious about both kinds of procedures. Subjects were classified as suspicious or unsuspicious on the basis of their replies on the open-ended questionnaires.

Statistical Analyses

Note that the statistical analysis and findings that will be described are somewhat different from those that were reported in the Proceedings. The present analysis is more powerful and the findings it produces are more persuasive than the earlier ones.

Product-moment correlations among the 12 scores were computed. Because the three scores for a procedure were obtained from the same items and, hence, were experimentally dependent, the correlations among the scores for a procedure were estimated from the correlations obtained from scores for different halves of the items on the procedure, corrected for double length. The 12 x 12 matrix was factor analyzed, using the principal-axis method, with iterated communalities, and oblique analytic rotation by the Promax procedure (Hendrickson, 1964). The number of factors was determined by Kaiser's (1960) rule and by an inspection of the latent roots.

Results

Five factors were identified for the unsuspicious subjects and three for the suspicious subjects. The factors accounted for 69% of the total variance in the first group and 51% in the second. The correlations between the factors were generally substantial in both groups (correlations ranged from .21 to .67 for the unsuspicious subjects and .42 to .50 for the suspicious subjects). The rotated factor loadings -- that is, the correlations with the reference vectors -- appear in Table 1 of your handout.

The factors were different in the two samples. For the unsuspicious subjects, four of the five factors were associated with differences in the group-pressure procedures. Factor I was defined by conformity and independence on the click task in the simulated group, Factor II by conformity, anticonformity, and independence on the estimating-probabilities questionnaire, Factor III by conformity and anticonformity on the attitude-item questionnaire, and Factor IV by conformity and independence on that same questionnaire. Only the attitude-item task in the simulated group did not define a distinct factor. Notice, also, that the loadings for conformity and those for anticonformity or independence were opposite in direction. The remaining factor, unlike the others, was linked with the responses to group pressure rather than with the procedures. This factor, Factor V, was marked by anticonformity on the two stimulated-group procedures.

For the suspicious subjects, two of the three factors also involved differences in the group-pressure devices. Factor I was loaded by conformity, anticonformity, and independence on both simulated-group procedures and Factor II was loaded by the three kinds of scores on both questionnaires.

Factor III, in contrast, was a response factor, defined by conformity and independence on the attitude-item task in the simulated group and the estimating-probabilities questionnaire. On all these factors, the loadings for conformity were opposite in direction to those for anticonformity or independence.

Discussion

One important finding concerns the generality of the various procedures. Responses to them were relatively differentiated, and this was most pronounced for the unsuspicious subjects. In this group, any procedural variation, either in social situation or experimental task, produced a difference. For the suspicious subjects, only the social situation affected the functioning of the procedures, suggesting that responses to suspicion are relatively general, at least across tasks. All in all, the import of these results is clear: the various procedures tapped distinctly different, though appreciably correlated, variables. Consequently, it is essential to distinguish between measures derived from such divergent procedures in examining the results of previous studies and in planning new ones. At the same time, the degree of correlation among the factors points to considerable generality -- at a higher order of analysis--forthe behavior sampled by these procedures.

The findings about dimensionality or the responses are not as clear cut. Conformity and independence appeared to represent a bipolar dimension, but anticonformity seemed to be quite distinct from both of them. These results lend some support to Asch's (1956) view that conformity competes with independence. At the same time, they bring into question conceptions

by Walker and Heyns (1962); Krech, Crutchfield, and Ballachey (1962); and Willis (1963, 1965) that pit conformity against anticonformity, or contrast anticonformity with independence. Methodologically, the findings imply that valuable information may be lost by ignoring anticonformity and independence responses in group-pressure studies.

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Figure 1

Facet Design for Group-Pressure Procedures Based on Social Situation and Experimental Task Parameters

EXPERIMENTAL TASK	SOCIAL SITUATION: Public Responding, Face-to-Face Groups	SOCIAL SITUATION: Private Responding, Nonpresent Norm Groups
Objective, Unambiguous	Asch situation--counting metronome clicks	Questionnaire with fictitious answers--estimating probabilities
Subjective, Ambiguous	Asch situation--responding to attitude items	Questionnaire with fictitious answers--responding to attitude items

Table 1

Obliquely-Rotated Group-Pressure Factors for Unsuspicious and Suspicious Subjects

	Unsuspicious Subjects (N = 43)					Suspicious Subjects (N = 67)		
	I	II	III	IV	V	I	II	III
Simulated Group--Clicks:								
Conformity	71	01	-12	-01	19	84	-02	-13
Anticonformity	-07	12	15	-02	-52	-04	26	-30
Independence	-82	-09	06	04	09	-83	-05	24
Simulated Group --Attitude Items:								
Conformity	23	23	12	03	26	47	-03	46
Anticonformity	-10	08	-37	04	-46	-50	04	-22
Independence	-22	-34	03	-13	-05	-19	-10	-32
Questionnaire--Estimating Probabilities:								
Conformity	10	47	14	-16	-11	-19	43	31
Anticonformity	-10	-50	00	-11	13	-06	-63	20
Independence	43	-34	15	04	-32	17	01	-44
Questionnaire--Attitude Items:								
Conformity	-08	01	45	49	-02	07	66	05
Anticonformity	12	-06	-85	09	09	03	-57	13
Independence	02	03	12	-88	-01	-15	-30	-15

Note.--All factors have been reflected. Decimal points have been omitted. Loadings of .30 or greater have been underlined.